

of Williams College, maintains an excellent course in meteorology.¹

This course occupies the first half year of each annual session. It is based on Davis's *Elementary Meteorology*, but much outside material is given in the form of lectures. In order to systematize the work, a syllabus covering both textbook and lectures is closely followed, but in this the order of topics is rearranged from the work by Davis to suit the needs of Professor Milham's classes.

Additional practical laboratory work is also imposed, consisting in the use of apparatus for observations, work on meteorological statistics, essays or short theses on special subjects, and work with the weather map in making forecasts. The following is the first page of the list of problems relating to statistics:

Monthly extremes of temperature for March, April, and May at Williamstown, Mass.

Monthly extremes of temperature for July, August, January, and February at Springfield, Mass.

Ice days at Amherst, Mass.

Normal absolute yearly range of pressure at Amherst, Mass.

Difference in temperature between Amherst and Williamstown, Mass.

Freezing days at Amherst, Mass.

Constancy of mean annual temperature at Amherst, Mass.

Extremes of temperature for January and July at Albany, N. Y., as compared with those at Williamstown, Mass.

Monthly extremes of temperature for July, August, January, and February at New Haven, Conn.

Monthly extremes of temperature for December, January, and February at Williamstown, Mass.

Extremes of temperature for July and January at New York, N. Y., as compared with those at Williamstown, Mass.

Difference in temperature between Albany, N. Y., and Williamstown, Mass.

Monthly extremes of temperature for July, August, January, and February at Minneapolis, Minn.

Difference between mean monthly temperatures computed from hourly observations and $\frac{1}{2}$ (max. + min.) at Amherst, Mass.

Annual barometric variation at Amherst, Mass.

Monthly extremes of temperature for July, August, January, and February at New York, N. Y.

Monthly extremes of temperature for June, July and August at Williamstown, Mass.

Monthly extremes of temperature for September, October, and November at Williamstown, Mass.

The following list contains some of the special topics on which essays must be written by the students.

Lightning.	Maximum and minimum thermometers.
Waterspouts.	Ocean and lake temperatures.
Blizzards.	Tornadoes.
Artificial rain.	Weather proverbs.
Foehn and chinook.	Sunspots and rainfall.
Sunset colors.	Snow line.
Thermometer shelters.	River stages.

During the current winter the students and various voluntary observers will carry out a special investigation into the distribution of abnormal low temperatures in neighboring valleys and the vertical temperature gradient during still clear nights.—C. A.

WEATHER BUREAU STATION AT CHARLES CITY, IOWA.

By CLARENCE J. ROOT, Assistant Observer.

A new Weather Bureau station was opened at Charles City, Floyd County, Iowa, on November 1, 1904. The longitude of Charles City is 92° 38' W., latitude 43° 04' N., and elevation

¹It was at Williams College that the eminent meteorologist, Prof. John Henry Coffin, was professor of natural philosophy, 1839-1843, and here he established our first mountain observatory for meteorological work, i. e., that on Mount Greylock, where continuous self-registering instruments were maintained for two years. "Coffin's Winds of the Northern Hemisphere," *Smithsonian*, 1851, is still one of the great storehouses of data relative to both the upper and lower clouds and the winds. The elaborate work, "Winds of the Globe," 1873, was quite an epoch in American meteorology. Professor Coffin was born in Northampton, Mass., 1806, September 6, and died in Easton, Pa., 1873, February 6. He was a graduate of Amherst College, and, after leaving Williams College held the position of professor of mathematics and astronomy in Lafayette College at Easton, Pa., until his death, when his son, Selden J. Coffin, succeeded him.

1015 feet above mean sea level. The city is situated in the valley of the Cedar River and is partially surrounded by hills ranging in height from 50 to 68 feet above street level. The station is located one block from the river. It is furnished with a full instrumental equipment, the wind instruments and electrical sunshine recorder being mounted on a 50-foot steel tower, in the base of which the thermometer shelter is suspended. The rain gages have a ground exposure in the yard. Two observations will be taken daily and the usual records kept.

METEOROLOGY IN NEW SOUTH WALES, AUSTRALIA.

Two important steps looking to a higher appreciation of meteorology have lately been taken in Australia. The first relates to the introduction of the so-called nature study in the public schools. In February last the Department of Public Instruction issued a syllabus of instruction to guide the course pursued by the teachers in schools under that department. This gives suggestions and instructions as to methods of teaching in the different grades from the kindergarten to the seventh class, or children of the age of fourteen or fifteen. Throughout this course the observation of nature is inculcated. Thus, in the lowest or first class the beginners receive a series of lessons on plant and animal life, and cultivate plants and flowers in the ground or in pots, observing the various stages of development. They use sand trays for modeling representations of the geographical features; they observe the appearances of the sky. In the second class the same course is pursued, but is applied to more difficult subjects. The observation of sky phenomena is continued and the effects of seasonal changes are observed. In the third class "Observing and recording simple meteorological phenomena and seasonal changes, with lessons based on these observations." In the fourth class we read "Physical features associated with the chief towns, with climatic conditions and commercial products; lessons on climate and atmospheric phenomena." In the fifth class "A course of experimental lessons in some branch of elementary science; lessons bearing on agricultural pursuits, with such scientific principles as will enable the pupil to understand the reasons, etc.

The whole course is adapted to direct the attention of the youth toward the studies and sciences that have a practical application in everyday life.

The second important meteorological feature is a so-called new departure, namely, the publication of a daily weather chart in the *Daily Telegraph*, which is the principal newspaper of the colony. We are indebted to Hon. Andrew Noble for copies of the *Daily Telegraph* of October 12, 13, and 14, containing the very first charts with isobars and winds. Such charts will undoubtedly educate the people to a condition of intelligence that ought to render impossible a repetition of the numerous rain-making schemes and other evidences of deplorable ignorance that were manifested during the recent terrible and disastrous drought. We quote the following from the *Daily Telegraph* of October 12.

The inclusion of meteorology in the new public schools syllabus has directed special attention to consideration of weather conditions. Correspondents, including a number of public school teachers, have applied to the *Daily Telegraph* for amplified daily information on this subject and the meteorological branch of the Sydney Observatory also has been requested to furnish details of the weather conditions and atmospheric pressures, the information upon which the weather forecasts are made.

The *Daily Telegraph* has arranged to publish daily a chart showing the principal features of weather conditions, including the high and low pressure isobars. Where possible the rainfall area will be indicated, and conditions on the coast will also be given.

This chart will be prepared from information supplied by Mr. H. A. Hunt, the acting meteorologist of this state. The publication of isobaric charts will enable students with their local knowledge of physical surroundings to anticipate in detail their probable weather more completely than is possible at the central office, where precise knowledge of local